

IN THE CLAIMS:

1. (Currently Amended) A method for the production of a composite yarn comprising at least an elastic yarn covered with at least a covering yarn and for automatic replacement of [[the]] spools of elastic yarn, the method comprising the ~~phases~~ steps of:

5 [[-]] feeding [[the]] covering yarn ~~in an essentially continuous way~~ along a feed path such that said covering yarn passes[[,]] through at least a first interlacing jet;

[[-]] delivering a first elastic yarn from a first spool such that said first elastic yarn passes through the first interlacing jet;

[[-]] coating the first elastic yarn with said covering yarn to form [[the]] composite yarn and winding the composite yarn on a cop;

10 [[-]] arranging a second spool of a second elastic yarn in a stand-by position;

[[-]] withholding an initial portion of said second elastic yarn in ~~proximity to~~ an area of said first interlacing jet;

[[-]] ~~when delivery of the first elastic yarn is interrupted;~~ replacing the cop of composite yarn with a new tube when delivery of said first elastic yarn is interrupted;

15 [[-]] releasing said initial portion of the second elastic yarn after delivery of said first elastic yarn is interrupted;

automatically replacing said first spool of elastic yarn with said second spool of elastic yarn when delivery of said first elastic yarn is interrupted

20 [[-]] joining said covering yarn and said second elastic yarn [[using]] via the first interlacing jet to resume forming said composite yarn; and

[[·]] resuming production of the composite yarn covering the second elastic yarn with said covering yarn and

winding the composite yarn on said new tube after said second elastic yarn has been covered with said covering yarn.

2. (Currently Amended) Method as claimed in claim 1, wherein[[·]] the initial ~~free-end~~ portion of the second elastic yarn is withheld by a retaining member.

3. (Currently Amended) Method according to claim 2, wherein:
said initial portion of the second elastic yarn is engaged by a deflecting element; and
said deflecting element is controlled to release said initial portion of the second elastic yarn.

4. (Currently Amended) Method as claimed in claim 3, wherein said deflecting element withholds said second elastic yarn such that said second elastic yarn does not enter out of the first interlacing jet, the second elastic yarn being disposed to be inserted automatically into said first interlacing jet when said deflecting element releases said second elastic yarn it is released
5 from said deflecting element.

5. (Currently Amended) Method as claimed in claim 4, wherein said second elastic yarn is inserted into the first interlacing jet ~~through the effect of the~~ via tension exerted by the

retaining member.

6. (Currently Amended) Method as claimed in claim 1, wherein the second elastic yarn is inserted into said first interlacing jet and withheld therein, ~~standing by for interruption of the~~
until said delivery of said first elastic yarn is interrupted.

7. (Previously Presented) Method as claimed in claim 1, wherein said retaining member withholds said initial free end at least partly by suction.

8. (Previously Presented) Method as claimed in claim 1, wherein feed of the second elastic yarn starts before joining to said covering yarn.

9. (Previously Presented) Method as claimed in claim 7, wherein the second elastic yarn delivered before joining to the covering yarn is sucked by said retaining member.

10. (Currently Amended) Method as claimed in claim 1, wherein ~~along their path~~ the covering yarn and the elastic yarn pass through a nip, defined by a pair of rollers downstream of said first interlacing jet.

11. (Currently Amended) Method as claimed in claim 1, wherein ~~along its path~~ the composite yarn passes through a nip defined by a pair of rollers.

12. (Currently Amended) Method as claimed in claim 1, wherein said elastic yarn is covered with said covering yarn ~~by means of~~ via said first interlacing jet.

13. (Original) Method as claimed in claim 12, wherein:

when delivery of said first elastic yarn is interrupted, said first interlacing jet is temporarily made to stop operating while the covering yarn continues to be fed therethrough;

after the second elastic yarn from the second spool starts to be delivered through the first interlacing jet, said first interlacing jet is re-activated to join the second elastic yarn to said covering yarn and resume production of said composite yarn.

14. (Original) Method as claimed in claim 13, wherein said second elastic yarn is already standing by inside the first interlacing jet when feed of the first elastic yarn is interrupted.

15. (Previously Presented) Method as claimed in claim 1, wherein said elastic yarn is covered with said covering yarn by a second interlacing jet, disposed downstream of the first interlacing jet along the path of the covering yarn.

16. (Original) Method as claimed in claim 15, wherein said first interlacing jet is temporarily activated to join the covering yarn and the second elastic yarn and subsequently de-activated, while the second interlacing jet remains active at least to produce the composite yarn

covering the elastic yarn with the covering yarn.

17. (Original) Method as claimed In claim 16, wherein said second interlacing jet is temporarily deactivated between interruption of feed of the first elastic yarn and start of feed of the second elastic yarn.

18. (Previously Presented) Method as claimed in claim 15, wherein when delivery of said first elastic yarn is interrupted, the covering yarn is fed through the first inoperative interlacing jet; after delivery of the second elastic yarn from the second spool starts, the first interlacing jet is temporarily activated to join the second elastic yarn to said covering yarn and subsequently deactivated.

19. (Currently Amended) Method as claimed in claim 12, wherein:

[[-]] said covering yarn is fed through a first nip between a pair of rollers, at least one of which is driven, and through said first interlacing jet;

[[-]] the composite yarn delivered from said first interlacing jet is fed to a second nip between a second pair of rollers;

[[-]] said second pair of rollers has a lower peripheral speed with respect to said first pair of rollers to relax the covering yarn between said second nip and said first nip; and

[[-]] the elastic yarn is fed by a delivery roller through said first interlacing jet, the delivery roller having a lower delivery speed than the speed of said second pair of rollers, to subject said

10 elastic yarn to a stretching effect between said second nip and said delivery roller.

20. (Previously Presented) Method as claimed in claim 1, wherein said covering yarn is a textured yarn, preferably a multiple filament textured yarn.

21. (Currently Amended) Method as claimed in claim 20, wherein said covering yarn is textured in line upstream of said first interlacing jet.

22. (Currently Amended) Method according to claim 1, further comprising the phases steps of:

[[a)] continuously feeding [[a]] said covering yarn to [[said]] a second interlacing jet;

5 [[b)] simultaneously feeding to said second interlacing jet ~~a first elastomer yarn~~ said first elastic yarn, said first elastomer yarn being unwound from [[a]] said first spool, disposed in a working position, ~~so as to obtain interlacing of~~ such that said covering yarn is interlaced with said first elastic elastomer yarn;

[[c)] withholding [[the]] a free end of ~~a second elastomer~~ said second elastic yarn, wound on [[a]] said second spool, disposed in a stand-by position, in a retaining area;

10 [[d)] detecting interruption of feed of said first ~~elastomer~~ elastic yarn, to control, in appropriate time relationship, transfer of said second spool of ~~elastomer~~ elastic yarn to said working position and transfer of said first spool of ~~elastomer~~ elastic yarn to said stand-by position;

15 [[(c)]] performing a relative movement of said covering yarn with respect to said second elastomer elastic yarn, in proximity to said retaining area of said free end of the second elastomer elastic yarn, ~~so as to come into contact with~~ such that said covering yarn contacts said second elastomer elastic yarn; and

20 [[(f)]] associating said second elastomer elastic yarn with said covering yarn using said first [[an]] interlacing jet, simultaneously releasing said free end of the second elastomer elastic yarn, to resume feed of said yarns to said second interlacing jet.

23. (Currently Amended) Method as claimed in claim 22, wherein said second elastomer elastic yarn is unwound linearly from said second spool to said retaining area, positioned upstream of said second interlacing jet.

24. (Currently Amended) Method as claimed in claim 22, wherein said free end of the second elastomer elastic yarn is withheld in the retaining area by suction means.

25. (Currently Amended) Method as claimed in claim 22, wherein said covering yarn and said first elastomer elastic yarn are conveyed continuously through said first interlacing jet ~~suitable to perform~~ such that alternate motion is created via said first interlacing jet in a direction transverse to the direction of feed of said yarns, ~~to bring~~ whereby said covering yarn ~~into contact with~~ contacts said second elastomer elastic yarn.

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26. (Currently Amended) A device for the production of a composite yarn formed of at least an elastic yarn covered with at least a covering yarn, the device comprising in combination:

a first interlacing jet;

a covering yarn feed path extending toward said first interlacing jet;

an elastic yarn feed path extending toward said first interlacing jet, said covering yarn and said elastic yarn forming composite yarn;

a feed path of said covering yarn and a feed path of said elastic yarn towards said first interlacing jet;

supporting means for arranging at least a first spool of elastic yarn and at least a second spool of elastic yarn ~~spools of elastic yarn~~;

winding members winding ~~to wind~~ the composite yarn on a cop being formed;

an interruption device, said interruption device ~~to interrupt~~ interrupting feed of the composite yarn to said cop being formed, said interruption device starting ~~and start~~ winding the composite yarn on a new winding tube;

characterized in that: said supporting means for the spools of elastic yarn are suitable to support at least a first spool of elastic yarn and at least a second spool of elastic yarn; and wherein said device further includes:

a retaining member associated with said first interlacing jet to withhold an initial free end of the elastic yarn of said second spool;

a sensor detecting ~~to detect~~ interruption of feed of said first elastic yarn to said first

interlacing jet;

25 a control element controlling to control release of said initial free end of the elastic yarn
of said second spool portion when said sensor detects an interruption of feed in the feed of the
first elastic yarn to said first interlacing jet ~~is detected~~.

27. (Currently Amended) Device as claimed in claim 26, ~~characterized in that~~ wherein
said retaining member is a suction member.

28. (Currently Amended) Device according to claim 26, ~~characterized by~~ further
comprising a deflecting element arranged to withhold an initial portion of said second elastic
yarn during delivery of the first elastic yarn to the first interlacing jet.

29. (Currently Amended) Device as claimed in claim 28, ~~characterized in that~~ wherein:
said retaining member and said deflecting element are disposed, with respect to said first
interlacing jet, ~~so as to~~ such that said retaining member and said deflecting element withhold the
second elastic yarn in a position outside ~~[[out]]~~ of said interlacing jet; ~~[[.]]~~ and ~~in that~~

5 the retaining member ~~is designed and arranged to tension~~ maintains said second elastic
yarn in tension such that said second elastic yarn is inserted ~~causing insertion thereof~~ into said
first interlacing jet when the deflecting element releases said second elastic yarn.

30. (Currently Amended) Device as claimed in claim 26, ~~characterized in that~~ wherein

said first interlacing jet includes an air jet, said elastic yarn being covered with covering yarn via
said is designed and controlled to perform covering of the elastic yarn with the covering yarn
using an air jet.

31. (Currently Amended) Device as claimed in claim 30, ~~characterized in that~~ further
comprising: it comprises

a first pair of drawing rollers defining a first nip along the feed path of the covering yarn
upstream of said first interlacing jet; [[,]] and

5 a second pair of drawing rollers defining a second nip, downstream of said first
interlacing jet, ~~and~~ wherein said second pair of rollers ~~can be~~ are controlled such that said
second pair of rollers [[to]] rotate at a lower peripheral speed than [[the]] a peripheral speed
of said first pair of rollers.

32. (Currently Amended) Device as claimed in claim 31, ~~characterized in that it~~
~~comprises~~ further comprising a delivery roller to deliver the elastic yarn, wherein a [[the]]
delivery speed of [[which]] said delivery roller is lower than the peripheral speed of the rollers
of said second pair.

33. (Currently Amended) Device as claimed in claim 28, ~~characterized in that~~ wherein
said retaining member and said deflecting element are disposed, with respect to said first
interlacing jet, ~~so as to~~ such that ~~withhold~~ the second elastic yarn is located inside said first

interlacing jet.

34. (Currently Amended) Device as claimed in claim 26, ~~characterized in that~~ wherein
~~disposed downstream of said first interlacing jet is a second interlacing jet is located~~
downstream of said first interlacing jet, said to which the elastic yarn and ~~[[the]]~~ said covering
yarn being delivered to said second interlacing jet, said second interlacing jet are fed and which
5 ~~performs~~ covering ~~[[of]]~~ the elastic yarn with the covering yarn.

35. (Currently Amended) Device as claimed in claim 34, ~~characterized in that the~~
wherein said first interlacing jet is controlled ~~to be~~ such that said first interlacing jet is activated
only temporarily to join the second elastic yarn to the covering yarn.

36. (Currently Amended) Device as claimed in claim 34, ~~characterized in that~~ wherein
~~disposed downstream of said second interlacing jet is a third pair of drawing rollers are disposed~~
downstream of said second interlacing jet, said third pair of drawing rollers defining a nip
through which the composite yarn delivered from the second interlacing jet passes.

37. (Currently Amended) Device as claimed in claim 26, further comprising
~~characterized in that it comprises~~ a texturing station for said covering yarn.

38. (Currently Amended) Device as claimed in claim 26, ~~characterized in that~~ wherein

said supporting means are ~~produced to withhold~~ maintains said first spool in a working position and said second spool in a standby position, said support means automatically removing and to remove the first spool from said working position and transferring the second spool from the standby position to the working position when feed of said first elastic yarn is interrupted.

39. (Currently Amended) Device as claimed in claim 26, ~~characterized in that~~ wherein said supporting means of the first and of the second spool of elastic yarn are controlled ~~so as to start~~ such that a replacement cycle of the first spool of elastic yarn with the second spool of elastic yarn is started following interruption of feed of the first elastic yarn.

40. (Currently Amended) Device as claimed in claim 39, ~~characterized in that~~ wherein said sensor detects the end of the elastic yarn of said first spool.

41. (Currently Amended) Device as claimed in claim 26, ~~characterized in that~~ wherein said first interlacing jet is movable ~~to cause~~ such that the second elastic yarn enters said first interlacing jet via movement of said first interlacing jet.

42. (Currently Amended) Device as claimed in claim 41, ~~characterized in that~~ wherein said first interlacing jet is movable from a withdrawn position to a forward position in a direction transverse to [[the]] a direction of feed of said yarns, ~~between a withdrawn position, and a forward position, in which~~ wherein said first interlacing jet is activated to join said second

5 elastomer elastic yarn to said covering yarn.

43. (Currently Amended) Device as claimed in claim 26, ~~characterized in that it comprises further comprising a collecting member, said collecting member collecting to collect~~ the covering yarn delivered between interruption of the first elastic yarn and start of delivery of the composite yarn formed with the second elastic yarn.

44. (Currently Amended) Device as claimed in claim 43, ~~characterized in that~~ wherein said collecting member comprises a suction member.

45. (Currently Amended) Device as claimed in claim 26, ~~characterized in that~~ wherein an oven is disposed along the path of said covering yarn upstream of said first interlacing jet.

46. (New) A method for the production of a composite yarn and for automatic replacement of spools of elastic yarn, the method comprising the steps of:

feeding covering yarn along a feed path to a first interlacing jet;

delivering a first elastic yarn from a first spool to the first interlacing jet;

5 coating the first elastic yarn with said covering yarn to form composite yarn;

winding the composite yarn on a cop;

arranging a second spool of a second elastic yarn in a stand-by position;

holding an initial portion of said second elastic yarn in an area of said first interlacing

jet;

10 replacing the cop of composite yarn with a new tube after delivery of said first elastic yarn is interrupted;

 releasing said initial portion of the second elastic yarn after delivery of said first elastic yarn is interrupted, said first spool of elastic yarn being automatically replaced with said second spool of elastic yarn when delivery of said first elastic yarn is interrupted, wherein the feed of
15 covering yarn to said first interlacing jet decreases or stops when said first spool of elastic yarn is automatically replaced with said second spool of elastic yarn;

 joining said covering yarn and said second elastic yarn via the first interlacing jet to resume forming said composite yarn; and

 winding the composite yarn on said new tube after said second elastic yarn has been
20 covered with said covering yarn.